

Technical Service Bulletin

Mazda North American Operations
Irvine, CA 92618-2922

**Subject:**

**LACK OF POWER / CHECK ENGINE LIGHT ON WITH DTC P0638:00
AND/OR P2112:00 AT LOW TEMPERATURES**

Bulletin No.: 01-001/18

Last Issued: 08/09/2018

BULLETIN NOTES

This bulletin supersedes the previously issued bulletin(s) listed below. The changes are noted in Red text.

Previous TSBs:	Date(s) Issued:
01-001/18	01/24/2018

APPLICABLE MODEL(S)/VINS

2016-2018 CX-9 vehicles with VINs lower than JM3TC*****220639 (produced before Jan. 8, 2018)

DESCRIPTION

After parking the vehicle at temperatures below the freezing, some customers may experience a lack of power with the check engine light on and DTC P0638:00 and/or P2112:00 stored in memory.

- P0638:00: Throttle valve actuator control range/performance problem (one drive cycle DTC)
- P2112:00: Throttle valve actuator motor current range/performance problem (one drive cycle DTC)

This concern may be caused by condensed water in the intake manifold entering the throttle valve. After parking at temperatures below freezing, the throttle valve may be frozen at the stand-by position, resulting in the symptom.

To prevent this concern, the control logic of the PCM has been modified to avoid frozen the throttle valve (by moving the valve at a certain time after the ignition has been turned off).

NOTE: With this modification, the main relay may stay on up to 90 minutes after the ignition switch is turned off. "BATTERY INSPECTION" in the Workshop Manual will be modified to properly check the battery parasitic draw after this modification.

Customers having this concern should have their vehicle repaired using the following repair procedure.

REPAIR PROCEDURE

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CONSUMER NOTICE: The information and instructions in this bulletin are intended for use by skilled technicians. Mazda technicians utilize the proper tools/equipment and take training to correctly and safely maintain Mazda vehicles. These instructions should not be performed by "do-it-yourselfers." Customers should not assume this bulletin applies to their vehicle or that their vehicle will develop the described concern. To determine if the information applies, customers should contact their nearest authorized Mazda dealership. Mazda North American Operations reserves the right to alter the specifications and contents of this bulletin without obligation or advance notice. All rights reserved. No part of this bulletin may be reproduced in any form or by any means, electronic or mechanical---including photocopying and recording and the use of any kind of information storage and retrieval system ---without permission in writing.

NOTE: This Service Information is most likely applicable if the following resolved the concern.

- Turning the ignition switch off and on
- Leaving the vehicle in warm environment

1. Reboot the IDS to clear memory before reprogramming.
2. Using IDS **108.03** or later software, reprogram the PCM to the latest calibration (refer to "Calibration Information" table) by following the "Module Reprogramming" procedure.

NOTE:

- Always update the IDS tool first, then follow on-screen instructions to download the needed calibration file for PCM reprogramming.
- It is not necessary to remove any fuses or relays during PCM reprogramming when the IDS screen prompts you to do so. You may accidentally stop power to one of the PCM terminals and cause the PCM to be blanked, or you may receive error messages during the IDS reprogramming procedure.
- IDS shows the calibration part numbers after programming the PCM.
- Please be aware that PCM calibration part numbers and file names listed in any Service Bulletin may change due to future releases of IDS software, and additional revisions made to those calibrations for service related concerns.
- When reprogramming a PCM, IDS will always display the "latest" calibration P/N available for that vehicle. If any calibration has been revised/updated to contain new information for a new service concern/issue, it will also contain all previously released calibrations.
- Start/Stop button vehicles only: DO NOT press the start/stop button during the reprogramming process.
- When performing this procedure, we recommend using the "Power Supply" mode in the Battery Management System to keep the vehicle battery up to capacity. If a different charger is used, make sure it does not exceed 20 AMPS. If it exceeds 20 AMPS, it could damage the VCM.

3. After performing the PCM reprogramming procedure, clear DTCs.
4. After clearing DTCs, start the engine and confirm that no warning lights stay on.

NOTE:

- If any DTCs should remain after performing DTC erase, diagnose the DTCs using MGSS online instructions or Workshop Manual section 01-02.
- Disconnect the negative battery cable and wait for 30 seconds or more to reset the fuel control learning data.

CALIBRATION INFORMATION

Model Year	Drive	File name
2016-17	2WD	PYFL-188K2-N
	AWD	PYFM-188K2-N
2018	2WD	PYD7-188K2-D
	AWD	PYD8-188K2-D

NOTE: It is not necessary to order a replacement PCM for this repair procedure.

WARRANTY INFORMATION

NOTE:

- This warranty information applies only to verified customer complaints on vehicles eligible for warranty repair.
- This repair will be covered under Fed. Emission Warranty (long term).
- Additional diagnostic time cannot be claimed for this repair.

Warranty Type	A
Symptom Code	6X
Damage Code	9W
Part Number Main Cause	5555-RP-PCM
Quantity	0
Operation Number / Labor Hours:	XXP14XFX / 0.3Hrs.

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